

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application. An identifier indicating the status of each claim is provided.

Listing of Claims

1. (Previously Presented) A recording apparatus for recording desired files on a recording medium, comprising:

index file generation means for generating an index file of the files recorded on the recording medium, said index file having a series of entries each being a block of extract information relating to and coordinated with one of the files recorded on the recording medium;

said index file comprising respective files, each associated with a different attribute selected from a plurality of attributes and each including a header and data related to said attribute,

wherein each of the respective files corresponding to a predetermined attribute selected from the plurality of attributes, and each of the plurality of respective files stores starting bytes and data lengths of entries corresponding to the predetermined attribute, and

wherein the plurality attributes include a property attribute, a text attribute, a thumbnail attribute, and an audio attribute,

classification means for classifying the block of extracted information included in each entry according to the plurality of attributes,

wherein each file of the index file is associated with only one attribute and each attribute of the plurality of attributes is associated with a respective file of the index file; and

a display means to display data based on the classification and association.

2. (Previously Presented) The recording apparatus according to claim 44, wherein said index file generation means sets the reproduction order within a group of those entries which are selected from among the entries provided in the index file.

3. (Previously Presented) The recording apparatus according to claim 2, wherein the group of entries is a group of those entries which correspond to favorite ones of the files selected by a user.

4. (Previously Presented) The recording apparatus according to claim 44, wherein said index file generation means forms an entry which describes the reproduction order in the form of a table in the index file to set information representative of the reproduction order to the index file.

5. (Previously Presented) A recording apparatus for recording desired files on a recording medium, comprising:

index file generation means for generating an index file of the files recorded on the recording medium having a series of entries each being a block of extract information relating to and coordinated with one of the files;

said index file generation means dividing the extract information relating to any of the files to generate the index file, which includes a plurality of entries;

said index file generation means setting, to the entry of the divided extract information, as information representative of a mutual relationship between the entries, information indicative of an entry in which the succeeding divisional extract information is recorded;

said index file generation means setting, to the entry in which the succeeding divisional extract information is recorded, an identifier indicating that the entry has the succeeding divisional extract information recorded therein,

wherein each of the respective files corresponding to a predetermined attribute selected from the plurality of attributes, and each of the plurality of respective files stores starting bytes and data lengths of entries corresponding to the predetermined attribute, and

wherein the plurality attributes include a property attribute, a text attribute, a thumbnail attribute, and an audio attribute,

wherein the block of extracted information included in each entry is classified according to a plurality of attributes, and

wherein each file of the index file is associated with only one attribute and each attribute of the plurality of attributes is associated with a respective file of the index file; and

a display means to display data based on the classification and association.

6. (Original) The recording apparatus according to claim 5, wherein said index file generation means groups pieces of the extract information for each attribute to generate the index file and sets, to the index file, an identifier indicating to which one of the groups each of the pieces of the divisional extract information belongs.

7. (Previously Presented) A recording apparatus for recording desired files on a recording medium, comprising:

index file generation means for generating an index file of the files recorded on the recording medium having a series of entries each being a block of extracted information relating to and coordinated with one of the files;

said index file generation means setting, where the files recorded on the recording medium include a plurality of child files generated by dividing one set of contents and a parent file for managing the plurality of child files, to the entries relating to the child files and the parent file, as information representative of a mutual relationship between the entries, identifiers indicating that the files are the child files and the parent file, respectively,

wherein each of the respective files corresponding to a predetermined attribute selected from the plurality of attributes, and each of the plurality of respective files stores starting bytes and data lengths of entries corresponding to the predetermined attribute, and

wherein the plurality attributes include a property attribute, a text attribute, a thumbnail attribute, and an audio attribute,

wherein the block of extracted information included in each entry is classified according to a plurality of attributes, and

wherein each file of the index file is associated with only one attribute and each attribute of the plurality of attributes is associated with a respective file of the index file; and

wherein data based on the classification and association is provided to an output device.

8. (Original) The recording apparatus according to claim 7, wherein said index file generation means sets, to the entries relating to the child files, information which indicates the entry relating to the parent file.

9. (Previously Presented) A recording apparatus for recording desired files on a recording medium, comprising:

index file generation means for generating an index file of the files recorded on the recording medium having a series of entries each being a block of extract information relating to and coordinated with one of the files;

said index file generation means registering information of file formats of the files into corresponding ones of the entries,

wherein each of the respective files corresponding to a predetermined attribute selected from the plurality of attributes, and each of the plurality of respective files stores starting bytes and data lengths of entries corresponding to the predetermined attribute, and

wherein the plurality attributes include a property attribute, a text attribute, a thumbnail attribute, and an audio attribute,

wherein the block of extracted information included in each entry is classified according to a plurality of attributes, and

wherein each file of the index file is associated with only one attribute and each attribute of the plurality of attributes is associated with a respective file of the index file; and

a display means to display data based on the classification and association.

10. (Canceled)

11. (Previously Presented) A recording apparatus for recording desired files on a recording medium, comprising:

index file generation means for generating an index file of the files recorded on the recording medium having a series of entries each being a block of extract information relating to and coordinated with one of the files;

said index file generation means registering information unique to processing means for the files and information for specifying the processing means relating to the unique information,

wherein the block of extracted information included in each entry is classified according to a plurality of attributes, and

wherein each file of the index file is associated with only one attribute and each attribute of the plurality of attributes is associated with a respective file of the index file; and

wherein each of the respective files corresponding to a predetermined attribute selected from the plurality of attributes, and each of the plurality of respective files stores starting bytes and data lengths of entries corresponding to the predetermined attribute, and

wherein the plurality attributes include a property attribute, a text attribute, a thumbnail attribute, and an audio attribute, and

a display means to display data based on the classification and association.

12. (Original) The recording apparatus according to claim 11, wherein said index file generation means registers the unique information into the index file by setting the unique information to the corresponding entries.

13. (Original) The recording apparatus according to claim 11, wherein said index file generation means registers the unique information into the index file by setting reference destinations of the unique information to the corresponding entries.

14. (Original) The recording apparatus according to claim 11, wherein said index file generation means forms the index file from a data group of the extract information and a management data group for managing the data group.

15. (Original) The recording apparatus according to claim 14, wherein said index file generation means forms the index file from different files for the data group of the extract information and the management data group from each other.

16. (Original) The recording apparatus according to claim 14, wherein said index file generation means groups the data group of the extract information for each attribute and forms the index file from different files for the individual groups of the data group and the management data group from one another.

17. (Original) The recording apparatus according to claim 5, wherein said index file generation means forms the index file from a data group of the extract information and a management data group for managing the data group.

18. (Original) The recording apparatus according to claim 17, wherein said index file generation means forms the index file from different files for the data group of the extract information and the management data group from each other.

19. (Original) The recording apparatus according to claim 17, wherein said index file generation means groups the data group of the extract information for each attribute and forms the index file from different files for the individual groups of the data group and the management data group from one another.

20. (Original) The recording apparatus according to claim 7, wherein said index file generation means forms the index file from a data group of the extract information and a management data group for managing the data group.

21. (Original) The recording apparatus according to claim 20, wherein said index file generation means forms the index file from different files for the data group of the extract information and the management data group from each other.

22. (Original) The recording apparatus according to claim 20, wherein said index file generation means groups the data group of the extract information for each attribute and forms the index file from different files for the individual groups of the data group and the management data group from one another.

23. (Original) The recording apparatus according to claim 9, wherein said index file generation means forms the index file from a data group of the extract information and a management data group for managing the data group.

24. (Original) The recording apparatus according to claim 23, wherein said index file generation means forms the index file from different files for the data group of the extract information and the management data group from each other.

25. (Original) The recording apparatus according to claim 23, wherein said index file generation means groups the data group of the extract information for each attribute and forms the index file from different files for the individual groups of the data group and the management data group from one another.

26. (Previously Presented) The recording apparatus according to claim 1, wherein said index file generation means forms the index file from a data group of the extract information and a management data group for managing the data group.

27. (Original) The recording apparatus according to claim 26, wherein said index file generation means forms the index file from different files for the data group of the extract information and the management data group from each other.

28. (Original) The recording apparatus according to claim 26, wherein said index file generation means groups the data group of the extract information for each attribute and forms

the index file from different files for the individual groups of the data group and the management data group from one another.

29. (Original) The recording apparatus according to claim 11, wherein said index file generation means forms the index file from a data group of the extract information and a management data group for managing the data group.

30. (Original) The recording apparatus according to claim 29, wherein said index file generation means forms the index file from different files for the data group of the extract information and the management data group from each other.

31. (Original) The recording apparatus according to claim 29, wherein said index file generation means groups the data group of the extract information for each attribute and forms the index file from different files for the individual groups of the data group and the management data group from one another.

32. (Previously Presented) A file management method for managing a plurality of files retained in a predetermined region, comprising the steps of:

generating an index file of the plurality of files, said index file having a series of entries each being a block of extract information relating to and coordinated with one of the plurality of files;

wherein said index file comprises respective files, each associated with a different attribute and each including a header and data related to said attribute,

wherein each of the respective files corresponding to a predetermined attribute selected from the plurality of attributes, and each of the plurality of respective files stores starting bytes and data lengths of entries corresponding to the predetermined attribute, and

wherein the plurality attributes include a property attribute, a text attribute, a thumbnail attribute, and an audio attribute, and

classifying the block of extracted information included in each entry according to a plurality of attributes;

a first associating step of associating each file of the index file with only one attribute;

a second associating step of associating each attribute of the plurality of attributes with a respective file of the index file; and

providing data based on the classifying step, first associating step and second associating step to an output device.

33. (Previously Presented) A file management method for managing a plurality of files retained in a predetermined region, comprising the steps of:

generating an index file of the plurality of files having a series of entries each being a block of extract information relating to and coordinated with one of the files;

dividing the extract information relating to any of the files to generate the index file, which includes a plurality of entries;

setting, to the entry of the divided extract information, as information representative of a mutual relationship between the entries, information indicative of an entry in which the succeeding divisional extract information is recorded; and

setting, to the entry in which the succeeding divisional extract information is recorded, an identifier indicating that the entry has the succeeding divisional extract information recorded therein,

classifying the block of extracted information included in each entry according to a plurality of attributes;

a first associating step of associating each file of the index file with only one attribute;

a second associating step of associating each attribute of the plurality of attributes with a respective file of the index file; and

providing data based on the classifying step, first associating step and second associating step to an output device,

wherein the plurality attributes include a property attribute, a text attribute, a thumbnail attribute, and an audio attribute, and

wherein each of the respective files corresponding to a predetermined attribute selected from the plurality of attributes, and each of the plurality of respective files stores starting bytes and data lengths of entries corresponding to the predetermined attribute.

34. (Previously Presented) A file management method for managing a plurality of files retained in a predetermined region, comprising the steps of:

generating an index file of the plurality of files having a series of entries each being a block of extract information relating to and coordinated with one of the files; and

setting, where the files recorded on the recording medium include a plurality of child files generated by dividing one set of contents and a parent file for managing the plurality of child files, to the entries relating to the child files and the parent file, as information representative of a

mutual relationship between the entries, identifiers indicating that the files are the child files and the parent file, respectively,

classifying the block of extracted information included in each entry according to a plurality of attributes;

a first associating step of associating each file of the index file with only one attribute;

a second associating step of associating each attribute of the plurality of attributes with a respective file of the index file; and

providing data based on the classifying step, first associating step and second associating step to an output device providing data based on the classification and association to an output device,

wherein the plurality attributes include a property attribute, a text attribute, a thumbnail attribute, and an audio attribute, and

wherein each of the respective files corresponding to a predetermined attribute selected from the plurality of attributes, and each of the plurality of respective files stores starting bytes and data lengths of entries corresponding to the predetermined attribute.

35. (Previously Presented) A file management method for managing a plurality of files retained in a predetermined region, comprising the steps of:

generating an index file of the plurality of files having a series of entries each being a block of extract information relating to and coordinated with one of the files; and

registering information of file formats of the files into corresponding ones of the entries, classifying the block of extracted information included in each entry according to a plurality of attributes;

a first associating step of associating each file of the index file with only one attribute;
a second associating step of associating each attribute of the plurality of attributes with a respective file of the index file; and
providing data based on the classifying step, first associating step and second associating step to an output device,
wherein the plurality attributes include a property attribute, a text attribute, a thumbnail attribute, and an audio attribute, and
wherein each of the respective files corresponding to a predetermined attribute selected from the plurality of attributes, and each of the plurality of respective files stores starting bytes and data lengths of entries corresponding to the predetermined attribute.

36. (Canceled)

37. (Previously Presented) A file management method for managing a plurality of files retained in a predetermined region, comprising the steps of:
generating an index file of the plurality of files having a series of entries each being of a block of extract information relating to and coordinated with one of the files; and
registering information unique to processing means for the files and information for specifying the processing means relating to the unique information,
classifying the block of extracted information included in each entry according to a plurality of attributes;
a first associating step of associating each file of the index file with only one attribute;

a second associating step of associating each attribute of the plurality of attributes with a respective file of the index file; and

providing data based on the classifying step, first associating step and second associating step to an output device,

wherein the plurality attributes include a property attribute, a text attribute, a thumbnail attribute, and an audio attribute, and

wherein each of the respective files corresponding to a predetermined attribute selected from the plurality of attributes, and each of the plurality of respective files stores starting bytes and data lengths of entries corresponding to the predetermined attribute.

38. (Previously Presented) A reproduction apparatus for reproducing files recorded on a predetermined recording medium based on a predetermined index file to provide the reproduced files to a user,

the index file being formed from a series of entries each being a block of extract information relating to and coordinated with one of the files recorded on said predetermined recording medium; and

said index file comprising respective files, each associated with a different attribute of a plurality of attributes, and each including a header and data related to said attribute,

classification means for classifying the block of extracted information included in each entry according to the plurality of attributes,

wherein each of the respective files corresponding to a predetermined attribute selected from the plurality of attributes, and each of the plurality of respective files stores starting bytes and data lengths of entries corresponding to the predetermined attribute, and

wherein the plurality attributes include a property attribute, a text attribute, a thumbnail attribute, and an audio attribute,

wherein each file of the index file is associated with only one attribute and each attribute of the plurality of attributes is associated with a respective file of the index file; and
a display means to display data based on the classification and association.

39. (Previously Presented) A reproduction apparatus for reproducing files recorded on a predetermined recording medium based on a predetermined index file to be provided to a user, comprising:

the index file being formed from a series of entries each being a block of extract information relating to and coordinated with one of the files;

the extract information relating to any of the files being divided to generate the index file which includes a plurality of entries;

the entry of the divided extract information having set thereto, as information representative of a mutual relationship between the entries, information indicative of an entry in which the succeeding divisional extract information is recorded;

the entry in which the succeeding divisional extract information is recorded having set thereto an identifier indicating that the entry has the succeeding divisional extract information recorded therein;

means for regenerating the divided extract information based on the information indicative of the entry in which the succeeding divisional extract information is recorded and the identifier indicating that the entry has the succeeding divisional extract information recorded therein,

wherein the block of extracted information included in each entry is classified according to a plurality of attributes, and

wherein each file of the index file is associated with only one attribute and each attribute of the plurality of attributes is associated with a respective file of the index file; and

a display means to display data based on the classification and association,

wherein the plurality attributes include a property attribute, a text attribute, a thumbnail attribute, and an audio attribute, and

wherein each of the respective files corresponding to a predetermined attribute selected from the plurality of attributes, and each of the plurality of respective files stores starting bytes and data lengths of entries corresponding to the predetermined attribute.

40. (Previously Presented) A reproduction apparatus for reproducing files recorded on a predetermined recording medium based on a predetermined index file to be provided to a user, comprising:

the index file being formed from a series of entries each being a block of extracted information relating to and coordinated with one of the files;

the entries which relate, where the files recorded on the recording medium include a plurality of child files generated by dividing one set of contents and a parent file for managing the plurality of child files, to the child files and the parent file having set thereto, as information representative of a mutual relationship between the entries, identifiers indicating that the files are the child files and the parent file, respectively; and

means for successively reproducing the plurality of child files based on the identifiers,

wherein the block of extracted information included in each entry is classified according to a plurality of attributes, and

wherein each file of the index file is associated with only one attribute and each attribute of the plurality of attributes is associated with a respective file of the index file; and

a display means to display data based on the classification and association,

wherein the plurality attributes include a property attribute, a text attribute, a thumbnail attribute, and an audio attribute, and

wherein each of the respective files corresponding to a predetermined attribute selected from the plurality of attributes, and each of the plurality of respective files stores starting bytes and data lengths of entries corresponding to the predetermined attribute.

41. (Previously Presented) A reproduction apparatus for reproducing files recorded on a predetermined recording medium based on a predetermined index file to be provided to a user, comprising:

the index file being formed from a series of entries each being a block of extract information relating to and coordinated with one of the files;

information of file formats of the files being registered in corresponding ones of the entries;

means for selecting those ones of the files, which can be reproduced based on the information of the file formats of the files and displaying a user interface of the selected files,

wherein the block of extracted information included in each entry is classified according to a plurality of attributes, and

wherein each file of the index file is associated with only one attribute and each attribute of the plurality of attributes is associated with a respective file of the index file; and

wherein each of the respective files corresponding to a predetermined attribute selected from the plurality of attributes, and each of the plurality of respective files stores starting bytes and data lengths of entries corresponding to the predetermined attribute, and

wherein the plurality attributes include a property attribute, a text attribute, a thumbnail attribute, and an audio attribute, and

a display means to display data based on the classification and association.

42. (Canceled)

43. (Previously Presented) A reproduction apparatus for reproducing files recorded on a predetermined recording medium based on a predetermined index file to be provided to a user, comprising:

the index file being formed from a series of entries each being a block of extract information relating to and coordinated with one of the files;

information unique to processing means for the files and information for specifying the processing means relating to the unique information being registered in the index file;

means for processing the files recorded on the recoding medium based on the unique information relating to the information for specifying the corresponding processing means,

wherein the block of extracted information included in each entry is classified according to a plurality of attributes, and

wherein each file of the index file is associated with only one attribute and each attribute of the plurality of attributes is associated with a respective file of the index file; and

wherein each of the respective files corresponding to a predetermined attribute selected from the plurality of attributes, and each of the plurality of respective files stores starting bytes and data lengths of entries corresponding to the predetermined attribute, and

wherein the plurality attributes include a property attribute, a text attribute, a thumbnail attribute, and an audio attribute, and

a display means to display data based on the classification and association.

44. (Previously Presented) The recording apparatus according to claim 1, wherein said index file generation means sets to the index file, as information representative of a mutual relationship between the entries, information indicative of a reproduction order of the entries or of the files corresponding to the entries.

45. (Previously Presented) The file management method according to claim 32, further comprising the step of setting to the index file, as information representative of a mutual relationship between the entries, information indicative of a reproduction order of the entries or of the files corresponding to the entries.

46. (Previously Presented) The reproduction apparatus according to claim 38, wherein information is set to the index file, indicative of a reproduction order of the entries or of the files corresponding to the entries, said information being representative of a mutual relationship between the entries; and

further comprising the step of successively reproducing the files recorded on said recording medium in accordance with the reproduction order set to said index file.

47. (Previously Presented) A reproduction method for reproducing files recorded on a predetermined recording medium based on a predetermined index file to provide the reproduced files to a user, said method comprising the steps of:

reproducing the index file, said index file being formed from a series of entries, each being a block of extracted information relating to and coordinated with one of the files recorded on said recording medium, and

each index file comprising respective files, each associated with a different attribute and each including a header and data related to said attribute,

classifying the block of extracted information included in each entry according to a plurality of attributes;

a first associating step of associating each file of the index file with only one attribute;

a second associating step of associating each attribute of the plurality of attributes with a respective file of the index file; and

providing data based on the classifying step, first associating step and second associating step to an output device,

wherein the plurality attributes include a property attribute, a text attribute, a thumbnail attribute, and an audio attribute, and

wherein each of the respective files corresponding to a predetermined attribute selected from the plurality of attributes, and each of the plurality of respective files stores starting bytes and data lengths of entries corresponding to the predetermined attribute.

48. (Previously Presented) The reproduction method according to claim 47, wherein information is set to the index file, indicative of a reproduction order of the entries or of the files corresponding to the entries, said information being representative of a mutual relationship between the entries; and

further comprising the step of successively reproducing the files recorded on said recording medium in accordance with the reproduction order set to said index file.

49. (Previously Presented) The recording apparatus according to claim 1, wherein the desired files include video files and audio files.

50. (Previously Presented) The recording apparatus according to claim 49, further comprising:

file generating means for converting the video files and the audio files into a QuickTime movie file;

wherein the index file has an organization substantially the same as that of a QuickTime Movie file.

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